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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/606,784 | 06/27/2003 | Tomoyuki Baba | 25-250 | 6392 |
| 7590 09/22/2004 | | | | |
| Arnold International P. O. BOX 129 Great Falls, VA 22066 | | | | |
| EXAMINER COLLINS, DARRYL J | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2873 | | | | |

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,784

Applicant(s)

BABA, TOMOYUKI

Examiner

Darryl J. Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 10-12, 14 and 16 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 8, 9, 13, 15 and 17-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 27062003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Elements 7 and 31 and illustrated in Figure 1 but are not discussed or identified in the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7, 10 - 12, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al. Akiyama et al teaches an optical system for projecting an image comprising a first prism (Figure 4, element B1) having an incident light refracting surface (Figure 4, element R1), a second prism (Figure 4, element B3) including an exit light refracting surface (Figure 4, element R16), prism internally reflecting surface such that light is reflected at least six times before exiting said exit light refracting surface (see Figure 4), forming no intermediate images and requiring no additional converging optics as claimed in independent claim 1. Akiyama et al also teaches the optical system including one or more additional prisms having internally reflecting surfaces (Figure 4, element B2) as claimed in dependent claim 2, a

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diaphragm positioned between two prisms (Figure 4, element R6) as claimed in dependent claim 3, an optical system having at least one prism having an aspheric surface (column 16, lines 8-10) as claimed in dependent claim 5, an optical system having at least one prism having a rotationally symmetric aspherical surface (column 16, lines 8-10) as claimed in dependent claim 7 and a projection-type image display apparatus having an image display apparatus and a screen for displaying the image (column 1, lines 14-28) as claimed in dependent claims 10, 11, 12, 14 and 16.

Allowable Subject Matter

Claims 4, 6, 8, 9, 13, 15 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. Although the prior art teaches an optical system for projecting an image using a two prism system, the prior art fails to teach such a system further having a ideal aperture stop as claimed in dependent claims 4 and 13, a prism having a free form surface as claimed in dependent claims 6 and 15 nor a system satisfying the conjugate distance relationship as claimed in dependent claims 8, 9 and 17-20.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nanba teaches a variable magnification optical system comprised of multiple prisms.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darryl J. Collins whose telephone number is 571-272-2325. The examiner can normally be reached on 6:30 - 5:00 Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



djc



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800